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EXAMINER	
CHOI, PETER Y	

ART UNIT	PAPER NUMBER
1786	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

LegalUSDocketing@mmm.com

Office Action Summary	Application No.	Applicant(s)	
	10/577,598	ANDERSEN, CARSTEN	
	Examiner	Art Unit	
	PETER Y. CHOI	1786	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 August 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5 and 7-13* is/are pending in the application.

4a) Of the above claim(s) *10 and 12* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,7-9,11 and 13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 16, 2010, has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-5, 7-9, 11, and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1-5, 7-9, 11, and 13, claims 1 and 11 recite that the bi-component fibers have an average length of approximately 3 mm and that the bi-component fibers have a length of approximately 3 mm. It is unclear what the scope of "approximately" necessarily entails, as the limitation is qualitative and subjective without further guidance in Applicant's specification as to the scope of the limitation. Additionally, based on Applicant's remarks of August 16, 2010, Applicant argues that "longer than 4 mm" is necessarily not within the scope of "approximately 3 mm," even though "longer than 4 mm" clearly includes lengths greater than but not including 4

mm. The burden is on Applicant to set forth where in Applicant's specification lengths "longer than 4 mm" is clearly contemplated as not commensurate in scope with the claimed limitation.

Claim 7 recites the limitation "said fibre board material." Claim 7 is dependent from claim 1, which does not recite a fibreboard material. Therefore, there is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-5, 7, 9, 11, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,642,601 to Thompson Jr., in view of USPN 5,516,580 to Frenette and USPN 4,118,531 to Hauser.

Regarding claims 1-5, 7, 9, 11, and 13, Thompson Jr. teaches a fiber insulation material comprising primary fiber components of a portion of 75% cellulose fibers, a portion of 15% synthetic fibers being crimped fibers, and a portion of 10% bi-component fibers comprising a core and an outer sheathing, the outer sheathing having a lower melting point than the core (Thompson Jr., column 1 line 5 to column 2 line 67, column 15 lines 40-56; additionally, *see for example* column 6 lines 5-13, column 8 line 38 to column 9 line 6, column 9 line 63 to column 10 line 11, column 13 line 63 to column 14 line 23, column 22 line 45 to column 23 line 24). It should be noted that the springy fibers of Thompson Jr. are within the scope of the crimped and

helically shaped crimped fibers, as the recitation of "springy" suggests that the fibers are coil-shaped and crimped in order to have stiffness and resilience to provide increased bulk or loft.

Thompson Jr. does not appear to specifically teach the length of the cellulose fibers and the bi-component fibers, the weight of the resulting material, and the length of the crimped fibers.

Regarding the claimed length of the cellulose fibers and the bi-component fibers and the weight of the resulting material, since the cellulose fibers and the bi-component fibers necessarily comprise fiber lengths and the resulting material necessarily comprises a weight, and since Thompson Jr. is silent as to each of the fiber lengths and material weight, it would have been necessary and therefore obvious to look to the prior art for conventional fiber lengths and material weights.

Frenette provides this conventional teaching, showing that it was known in the insulation material art to form an insulating material comprising cellulosic fibers and synthetic bicomponent fibers, wherein the cellulosic fibers have a length from about 1 mm to about 4 mm, the bicomponent fibers have a length longer than 4 mm, and wherein the resulting material has a density of 2 lb/cu.ft. or 1.5 lb./cu.ft. (Frenette, column 1 lines 7-12, column 2 lines 3-32, column 3 line 4 to column 4 line 6). The lower range of "longer than 4 mm" clearly includes lengths greater than but not including 4 mm. It would have been obvious to one of ordinary skill in the insulation art at the time the invention was made to form the insulating material of Thompson Jr., with the cellulose and bicomponent fiber lengths, such as about 1 to 4 mm and longer than about 4 mm, and material weight, as taught by Frenette, motivated by the desire of forming a conventional fiber insulation material with bicomponent fiber lengths and a material weight

known in the insulation art to be predictably suitable in forming fire retardant fiber insulation materials.

Additionally, as set forth above, it is unclear what the scope of "approximately 3 mm" necessarily entails. It is Examiner's position that "longer than 4 mm" clearly includes lengths greater than but not including 4 mm, which, absent to the contrary, appear to be within the scope of the claimed invention, as it would have been obvious to form bicomponent fibers having a length such as about 4 mm, based on the desired strength of the composition and the desired level of bonding, as shorter bicomponent fibers would predictably result in more bond points between the fibers since shorter fibers are easier to disperse and provide more flexibility than longer fibers. Fibers of slightly longer than 4 mm would give an average length of slightly greater than 4 mm. Applicants claim an average length of approximately 3 mm. The term "approximately" gives additional breath to the 3 mm, and it is the position of Examiner that given the wide range of length possible, a value of 4 mm is approximately 3 mm.

Regarding the claimed length of the crimped fibers, since the crimped fibers necessarily comprise fiber lengths, and since Thompson Jr. is silent as to the fiber length, it would have been necessary and therefore obvious to look to the prior art for conventional fiber lengths.

Hauser provides this conventional teaching, showing that it was known in the fiber insulation material art to form a fiber insulation material comprising synthetic polyester helically shaped crimped fibers having a length between about 2 and 15 centimeters (Hauser, column 1 lines 11-32, column 2 lines 3-21, column 3 lines 31-68, column 5 lines 31-47, column 6 lines 35-59, column 7 lines 27-60). Hauser teaches that forming a web with such fibers adds resiliency, loft and compression resistance to the web. Similarly, Thompson Jr. teaches that the springy

synthetic polyester fibers are resilient and provide bulk or loft to the insulation material (Thompson Jr., column 15 lines 30-36).

Therefore, it would have been obvious to one of ordinary skill in the fiber insulation material art at the time the invention was made to form the insulating material of Thompson Jr., wherein the springy polyester fibers are the synthetic polyester helically shaped crimped fibers having a length between about 2 and 15 centimeters, as taught by Hauser, motivated by the desire of forming a conventional fiber insulation material with synthetic polyester fibers known in the fiber insulation material art to predictably improve the resiliency, loft and compression resistance of the fiber insulation material. It should be noted that in the case where the claimed ranges overlap or lie inside ranges disclosed by the prior art, a prima facie case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990).

Regarding claim 2, Thompson Jr. teaches that the synthetic fibers are provided with fire-retarding chemical (Thompson Jr., column 13 line 63 to column 14 line 23, column 15 lines 30-67, column 22 line 45 to column 23 line 24). It should be noted that Thompson Jr. teaches the benefits of applying fire retardant chemical to the resulting material when additional penetration of the liquid fire retardant chemical is needed. Therefore, the synthetic fibers are provided with fire-retarding chemical.

Alternatively, it would have been obvious to one of ordinary skill in the insulating material art at the time the invention was made to form the insulating material of Thompson Jr., wherein the synthetic fibers are provided with fire-retarding chemical, as Thompson Jr.suggests that additional fire resistance may be imparted to the fibers constituting the insulating material by

adding liquid fire retardant chemical to the insulating material, and motivated by the desire of forming a conventional insulating material having the desired fire resistance suitable for the intended application, as providing the synthetic fibers with fire retardant chemical additionally predictably increases the fire resistance of the resulting insulating material.

Regarding claim 3, Thompson Jr. teaches that the cellulose fibers are saturated with the fire-retarding chemical (Thompson Jr., column 9 line 63 to column 10 line 11, column 13 line 63 to column 14 line 23, column 15 lines 30-67, column 22 line 45 to column 23 line 24).

Regarding claims 4 and 13, Thompson Jr. does not appear to teach that the content of the fire-retarding chemical is between 1 and 30% of the total fiber material composition and that the fire-retarding chemical comprises at least one of Borax, Boric acid, Ammonium sulphate and aluminum sulphate mixed with the synthetic fibers. However, Thompson Jr. teaches that any suitable fire retardant chemical can be applied, for example, a boron composition (Thompson Jr., column 8 line 37 to column 9 line 6). Since Thompson Jr. is silent as to the specific fire retarding chemical and the amount of chemical that is applied, it would have been necessary and therefore obvious to look to the prior art for conventional fire retardant chemicals and amounts.

Frenette provides this conventional teaching, showing that it was known in the insulation material art to form an insulating material comprising cellulosic fibers and synthetic fibers, wherein a fire retardant chemical such as borax, boric acid, ammonium sulphate or aluminum sulfate is typically added at 10 to 30% (Frenette, column 1 lines 7-12, column 2 lines 3-32, column 3 line 4 to column 4 line 6).

It would have been obvious to one of ordinary skill in the insulation art at the time the invention was made to form the insulating material of Thompson Jr., with the fire retardant

chemical and in the amounts, as taught by Frenette, motivated by the desire of forming a conventional fiber insulation material with fire retardant chemicals and in amounts known in the insulation art to be predictably suitable in forming fire retardant fiber insulation materials.

Regarding claim 5, Frenette teaches that the cellulose fibers having a length between about 1 mm to about 4 mm (Frenette, column 1 lines 7-12, column 2 lines 3-32, column 3 line 4 to column 4 line 6).

Regarding claim 7, Frenette teaches that the fiber board material is manufactured with a grammar weight of 2 lb/cu.ft. or 1.5 lb./cu.ft. (Frenette, column 1 lines 7-12, column 2 lines 3-32, column 3 line 4 to column 4 line 6).

Additionally, it should be noted that a fiber board material is not positively claimed, as the claimed invention is directed to a fiber insulation material, and the claimed fiber insulation material is not required to have the claimed grammar weight. The claim only appears to require that *when* the fiber insulation is used to manufacture of a fiberboard material, the grammar weight will comprise the claimed grammar weight. Therefore, the claimed limitation is interpreted as an intended use limitation. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. Since the prior art combination teaches a substantially similar structure and composition (a fiber insulation material comprising the claimed cellulose fibers, crimped fibers and bicomponent fibers, each of the fibers having the claimed lengths and each of the fibers present in the claimed amounts) as the claimed invention, the prior art combination appears capable of performing the claimed use.

Regarding claim 9, Hauser teaches that the crimped synthetic fibers are helically shaped (Hauser, column 1 lines 11-32, column 2 lines 3-21, column 3 lines 31-68, column 5 lines 31-47, column 6 lines 35-59, column 7 lines 27-60).

Alternatively, it would have been obvious to one of ordinary skill in the fiber insulation material art at the time the invention was made to form the insulating material of Thompson Jr., wherein the springy polyester fibers are the synthetic polyester helically shaped crimped fibers, as taught by Hauser, motivated by the desire of forming a conventional fiber insulation material with synthetic polyester fibers known in the fiber insulation material art to predictably improve the resiliency, loft and compression resistance of the fiber insulation material.

Regarding claim 11, Frenette teaches that the bicomponent fibers have a length of longer than 4 mm (Frenette, column 1 lines 7-12, column 2 lines 3-32, column 3 line 4 to column 4 line 6). It should be noted that Applicants' specification does not quantitatively and/or objectively define the scope of "approximately." Absent evidence to the contrary that the fiber length of the Frenette is necessarily outside the scope of the claimed fiber length, the fiber length of Frenette appears to be within the scope of the claimed invention, as it would have been obvious to form bicomponent fibers having a length such as about 4 mm, based on the desired strength of the composition and the desired level of bonding, as shorter bicomponent fibers would predictably result in more bond points between the fibers.

Alternatively, it would have been obvious to one of ordinary skill in the insulating material art at the time the invention was made to form the insulating material of Thompson Jr., further varying the fiber lengths such that the fiber lengths are approximately 3 mm, as it is within the level of ordinary skill to determine a suitable fiber length based on the desired fiber

process used and the desired level of bonding and structural integrity suitable for the intended application.

Regarding claim 13, the prior art combination teaches that the fire-retarding chemical comprises borax, boric acid, ammonium sulphate or aluminum sulfate mixed with the synthetic fibers (Thompson Jr., column 13 line 63 to column 14 line 23, column 15 lines 30-67, column 22 line 45 to column 23 line 24; Frenette, column 1 lines 7-12, column 2 lines 3-32, column 3 line 4 to column 4 line 6).

6. Claims 1-5, 7, 9, 11, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,642,601 to Thompson Jr., in view of USPN 5,167,764 to Nielsen and USPN 4,118,531 to Hauser.

Regarding claims 1-5, 7, 9, 11, and 13, Thompson Jr. teaches a fiber insulation material comprising primary fiber components of a portion of 75% cellulose fibers, a portion of 15% synthetic fibers being crimped fibers, and a portion of 10% bi-component fibers comprising a core and an outer sheathing, the outer sheathing having a lower melting point than the core (Thompson Jr., column 1 line 5 to column 2 line 67, column 15 lines 40-56; additionally, *see for example* column 6 lines 5-13, column 8 line 38 to column 9 line 6, column 9 line 63 to column 10 line 11, column 13 line 63 to column 14 line 23, column 22 line 45 to column 23 line 24). It should be noted that the springy fibers of Thompson Jr. are within the scope of the crimped and helically shaped crimped fibers, as the recitation of "springy" suggests that the fibers are coil-shaped and crimped in order to have stiffness and resilience to provide increased bulk or loft.

Thompson Jr. does not appear to specifically teach the length of the cellulose fibers and the bi-component fibers, and the length of the crimped fibers.

Regarding the claimed length of the cellulose fibers and the bi-component fibers and the weight of the resulting material, since the cellulose fibers and the bi-component fibers necessarily comprise fiber lengths and the resulting material necessarily comprises a weight, and since the prior art is silent as to each of the fiber lengths and material weight, it would have been necessary and therefore obvious to look to the prior art for conventional fiber lengths and material weights.

Nielsen provides this conventional teaching, showing that it was known in the nonwoven art to form a bonded fibrous web material comprising cellulose fibers and bicomponent fibers, wherein the cellulose fibers have a length from about 1/8 inch to about ½ inch (which is equivalent to about 3.175 mm to about 6.35 mm), and the bicomponent fibers have a length from about 1 mm to about 75 mm (Nielsen, column 1 line 9 to column 4 line 68, column 5 lines 35-61, column 9 lines 51-53). Nielsen teaches that the bonded fibrous web material had increased bond strength, greater web uniformity, superior breaking strength and elongation properties (Id., column 1 lines 9-16, column 9 lines 51-53).

It would have been obvious to one of ordinary skill in the nonwoven art at the time the invention was made to form the bonded fibrous web material of Thompson Jr., with the cellulose and bicomponent fiber lengths, such as about 1 to 10 mm and approximately 3 mm, as taught by Nielsen, motivated by the desire of forming a conventional bonded fibrous web material with cellulose and bicomponent fiber lengths known in the art as being predictably suitable in forming

bonded fibrous web materials having increased bond strength, greater web uniformity, superior breaking strength and elongation properties.

Additionally, as set forth above, it is unclear what the scope of "approximately 3 mm" necessarily entails. It should be noted that in the case where the claimed ranges overlap or lie inside ranges disclosed by the prior art, a prima facie case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990).

Alternatively, it would have been obvious to one of ordinary skill in the insulating material art at the time the invention was made to form the insulating material of Thompson Jr., further varying the bicomponent fiber lengths such that the fiber lengths are approximately 3 mm, as it is within the level of ordinary skill to determine a suitable fiber length based on the desired fiber process used and the desired level of bonding and structural integrity suitable for the intended application.

Regarding the claimed length of the crimped fibers, since the crimped fibers necessarily comprise fiber lengths, and since the prior art is silent as to the fiber length, it would have been necessary and therefore obvious to look to the prior art for conventional fiber lengths.

Hauser provides this conventional teaching, showing that it was known in the fiber insulation material art to form a fiber insulation material comprising synthetic polyester helically shaped crimped fibers having a length between about 2 and 15 centimeters (Hauser, column 1 lines 11-32, column 2 lines 3-21, column 3 lines 31-68, column 5 lines 31-47, column 6 lines 35-59, column 7 lines 27-60). Hauser teaches that forming a web with such fibers adds resiliency, loft and compression resistance to the web. Similarly, Thompson Jr. teaches that the springy

synthetic polyester fibers are resilient and provide bulk or loft to the insulation material (Thompson Jr., column 15 lines 30-36).

Therefore, it would have been obvious to one of ordinary skill in the fiber insulation material art at the time the invention was made to form the insulating material of Thompson Jr., wherein the springy polyester fibers are the synthetic polyester helically shaped crimped fibers having a length between about 2 and 15 centimeters, as taught by Hauser, motivated by the desire of forming a conventional fiber insulation material with synthetic polyester fibers known in the fiber insulation material art to predictably improve the resiliency, loft and compression resistance of the fiber insulation material. It should be noted that in the case where the claimed ranges overlap or lie inside ranges disclosed by the prior art, a prima facie case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990).

Regarding claim 2, Thompson Jr. teaches that the synthetic fibers are provided with fire-retarding chemical (Thompson Jr., column 13 line 63 to column 14 line 23, column 15 lines 30-67, column 22 line 45 to column 23 line 24). It should be noted that Thompson Jr. teaches the benefits of applying fire retardant chemical to the resulting material when additional penetration of the liquid fire retardant chemical is needed. Therefore, the synthetic fibers are provided with fire-retarding chemical.

Alternatively, it would have been obvious to one of ordinary skill in the insulating material art at the time the invention was made to form the insulating material of Thompson Jr., wherein the synthetic fibers are provided with fire-retarding chemical, as the prior art suggests that additional fire resistance may be imparted to the fibers constituting the insulating material by

adding liquid fire retardant chemical to the insulating material, and motivated by the desire of forming a conventional insulating material having the desired fire resistance suitable for the intended application, as providing the synthetic fibers with fire retardant chemical additionally predictably increases the fire resistance of the resulting insulating material.

Regarding claim 3, Thompson Jr. teaches that the cellulose fibers are saturated with the fire-retarding chemical (Thompson Jr., column 9 line 63 to column 10 line 11, column 13 line 63 to column 14 line 23, column 15 lines 30-67, column 22 line 45 to column 23 line 24).

Regarding claims 4 and 13, Thompson Jr. does not appear to teach that the content of the fire-retarding chemical is between 1 and 30% of the total fiber material composition and that the fire-retarding chemical comprises at least one of Borax, Boric acid, Ammonium sulphate and aluminum sulphate mixed with the synthetic fibers. However, Thompson Jr. teaches that any suitable fire retardant chemical can be applied, for example, a boron composition (Thompson Jr., column 8 line 37 to column 9 line 6). Since Thompson Jr. is silent as to the specific fire retarding chemical and the amount of chemical that is applied, it would have been necessary and therefore obvious to look to the prior art for conventional fire retardant chemicals and amounts.

Frenette provides this conventional teaching, showing that it was known in the insulation material art to form an insulating material comprising cellulosic fibers and synthetic fibers, wherein a fire retardant chemical such as borax, boric acid, ammonium sulphate or aluminum sulfate is typically added at 10 to 30% (Frenette, column 1 lines 7-12, column 2 lines 3-32, column 3 line 4 to column 4 line 6).

It would have been obvious to one of ordinary skill in the insulation art at the time the invention was made to form the insulating material of Thompson Jr., with the fire retardant

chemical and in the amounts, as taught by Frenette, motivated by the desire of forming a conventional fiber insulation material with fire retardant chemicals and in amounts known in the insulation art to be predictably suitable in forming fire retardant fiber insulation materials.

Regarding claim 5, Nielsen teaches that the cellulose fibers having a length between about 3.175 mm to about 6.35 mm (Nielsen, column 3 lines 54-59).

Regarding claim 7, a fiber board material is not positively claimed, as the claimed invention is directed to a fiber insulation material, and the claimed fiber insulation material is not required to have the claimed grammar weight. The claim only appears to require that *when* the fiber insulation is used to manufacture of a fiberboard material, the grammar weight will comprise the claimed grammar weight. Therefore, the claimed limitation is interpreted as an intended use limitation. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. Since the prior art combination teaches a substantially similar structure and composition (a fiber insulation material comprising the claimed cellulose fibers, crimped fibers and bicomponent fibers, each of the fibers having the claimed lengths and each of the fibers present in the claimed amounts) as the claimed invention, the prior art combination appears capable of performing the claimed use.

Regarding claim 9, Hauser teaches that the crimped synthetic fibers are helically shaped (Hauser, column 1 lines 11-32, column 2 lines 3-21, column 3 lines 31-68, column 5 lines 31-47, column 6 lines 35-59, column 7 lines 27-60).

Alternatively, it would have been obvious to one of ordinary skill in the fiber insulation material art at the time the invention was made to form the insulating material of Thompson Jr., wherein the springy polyester fibers are the synthetic polyester helically shaped crimped fibers, as taught by Hauser, motivated by the desire of forming a conventional fiber insulation material with synthetic polyester fibers known in the fiber insulation material art to predictably improve the resiliency, loft and compression resistance of the fiber insulation material.

Regarding claim 11, Nielsen teaches that the bicomponent fibers have a length of about 1 mm to about 75 mm (Nielsen, column 5 lines 48-53). It would have been obvious to one of ordinary skill in the insulating material art at the time the invention was made to form the insulating material of Thompson Jr., further varying the bicomponent fiber lengths such that the fiber lengths are approximately 3 mm, as it is within the level of ordinary skill to determine a suitable fiber length based on the desired fiber process used and the desired level of bonding and structural integrity suitable for the intended application.

Regarding claim 13, the prior art combination teaches that the fire-retarding chemical comprises borax, boric acid, ammonium sulphate or aluminum sulfate mixed with the synthetic fibers (Thompson Jr., column 13 line 63 to column 14 line 23, column 15 lines 30-67, column 22 line 45 to column 23 line 24; Frenette, column 1 lines 7-12, column 2 lines 3-32, column 3 line 4 to column 4 line 6).

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson Jr. in view of Frenette and Hauser, as applied to claims 1-5, 7, 9, 11, and 13 above, and further in view of USPN 5,858,530 to McCullough.

Regarding claim 8, the prior art combination does not appear to teach that the synthetic fibers are hollow. Since the prior art combination is silent as to the exact structure of the synthetic fibers, it would have been necessary and therefore obvious to look to the prior art for conventional synthetic fiber structures in the fiber insulation material art.

McCullough provides this conventional teaching showing that it was known in the fiber insulation art to form a fiber insulation material comprising synthetic fibers and natural fibers, wherein the synthetic fibers are crimped and/or hollow (McCullough, column 1 lines 8-36, column 9 lines 19-43, column 19 lines 20-30, column 23 lines 1-35).

It would have been obvious to one of ordinary skill in the fiber insulation material art to form the insulating material of the prior art combination, wherein the synthetic fibers are hollow, as taught by McCullough, motivated by the desire of forming a conventional fiber insulation material with hollow fibers which were known in the fiber insulation material art to predictably result in flexible fibers which are cheaper without sacrificing performance.

8. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson Jr. in view of Nielsen and Hauser, as applied to claims 1-5, 7, 9, 11, and 13 above, and further in view of USPN 5,858,530 to McCullough.

Regarding claim 8, the prior art combination does not appear to teach that the synthetic fibers are hollow. Since the prior art combination is silent as to the exact structure of the synthetic fibers, it would have been necessary and therefore obvious to look to the prior art for conventional synthetic fiber structures in the fiber insulation material art.

McCullough provides this conventional teaching showing that it was known in the fiber insulation art to form a fiber insulation material comprising synthetic fibers and natural fibers, wherein the synthetic fibers are crimped and/or hollow (McCullough, column 1 lines 8-36, column 9 lines 19-43, column 19 lines 20-30, column 23 lines 1-35).

It would have been obvious to one of ordinary skill in the fiber insulation material art to form the insulating material of the prior art combination, wherein the synthetic fibers are hollow, as taught by McCullough, motivated by the desire of forming a conventional fiber insulation material with hollow fibers which were known in the fiber insulation material art to predictably result in flexible fibers which are cheaper without sacrificing performance.

Response to Arguments

9. Applicant's arguments filed August 16, 2010, have been fully considered but they are not persuasive. Applicant argues that it would be mathematically impossible for bi-component fibers having a length longer than 4 to exhibit an average length of approximately 3 mm. Examiner respectfully disagrees. As set forth above, it is unclear what the scope of "approximately" necessarily entails, as the limitation is qualitative and subjective without further guidance in Applicant's specification as to the scope of the limitation. Therefore, it is unclear how Applicant concludes that lengths taught by the prior art, such as Frenette, are necessarily not within the scope of "approximately," as such a conclusion requires that the scope of the "approximately" is definite.

Frenette teaches that it was known in the insulation material art to form an insulating material comprising cellulosic fibers and synthetic bicomponent fibers, wherein the cellulosic

fibers have a length from about 1 mm to about 4 mm and the bicomponent fibers have a length longer than 4 mm. The lower range of "longer than 4 mm" clearly includes lengths greater than but not including 4 mm.

It would have been obvious to one of ordinary skill in the insulation art at the time the invention was made to form the insulating material of Thompson Jr., with the cellulose and bicomponent fiber lengths, such as about 1 to 4 mm and longer than about 4 mm, as taught by Frenette, motivated by the desire of forming a conventional fiber insulation material with bicomponent fiber lengths and a material weight known in the insulation art to be predictably suitable in forming fire retardant fiber insulation materials.

Additionally, it is Examiner's position that "longer than 4 mm" clearly includes lengths greater than but not including 4 mm, which, absent to the contrary, appear to be within the scope of the claimed invention. The burden is on Applicant to set forth where in Applicant's specification lengths "longer than 4 mm" is clearly contemplated as not commensurate in scope with the claimed invention, as it would have been obvious to form bicomponent fibers having a length such as about 4 mm, based on the desired strength of the composition and the desired level of bonding, as shorter bicomponent fibers would predictably result in more bond points between the fibers.

Applicant argues that a complete and fair reading of Frenette would not lead one of ordinary skill to seek to use bi-component fibers having an average length of approximately 3 mm, since such a modification would render Frenette unsatisfactory for its intended purpose. Examiner respectfully disagrees. It should be noted that Frenette is used in the rejection as a

secondary reference to teach cellulose and bicomponent fiber lengths known in the art in insulating materials.

As set forth above, Frenette teaches that the cellulosic fibers have a length from about 1 mm to about 4 mm and the bicomponent fibers have a length longer than 4 mm. Since the scope of "approximately" is unclear, and since a length longer than 4 mm clearly includes lengths greater than but not including 4 mm, the lower range of the bicomponent fiber length appears to be within the scope of the claimed invention, absent evidence to the contrary.

Additionally, the lengths relied on by Examiner do not appear to render Frenette unsatisfactory for its intended purpose, as Frenette is only relied to teach cellulose and bicomponent fiber lengths known in the art in insulating materials, and Applicant does not provide evidence that the invention of Thompson Jr. would be rendered unsatisfactory for its intended purpose, based on the teachings of Frenette.

Applicant argues that if Frenette was modified to include sufficient fibers having a length of 3 mm or shorter in order to obtain an average length of approximately 3 mm as claimed, then the synthetic fibers would necessarily not have a longer than the short (1-4 mm) cellulosic fibers. Examiner respectfully disagrees. It should be noted that Frenette is not relied on to teach an average length of shorter than 3 mm. Therefore, Applicant's argument is not commensurate in scope with the current rejection.

Additionally, the use of patents as references is not limited to what the patentees describe as their own inventions or to the problems with which they are concerned. They are part of the literature of the art, relevant for all they contain. A reference may be relied upon for all that it

would have reasonably suggested to one having ordinary skill the art, including nonpreferred embodiments. MPEP 2123.

In response to Applicant's argument, Examiner is not necessarily relying on Frenette to teach bicomponent fibers having a length of 3 mm, as Examiner relies on Frenette to teach bicomponent fibers having a length of longer than 4 mm, which appears to be within the scope of "approximately 3 mm."

Applicant argues that Applicant has provided objective evidence of nonobviousness attributable to and commensurate in scope with the presently claimed invention. Examiner respectfully disagrees. As set forth above, the scope of "approximately 3 mm" is indefinite and the prior art combination appears to render obvious the claimed invention, absent evidence that the scope of "approximately 3 mm" specifically excludes the fiber lengths disclosed by Frenette.

In response to Applicant's argument that Examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

As set forth above, the scope of "approximately 3 mm" is indefinite and the prior art combination appears to render obvious the claimed invention, absent evidence that the scope of "approximately 3 mm" specifically excludes the fiber lengths disclosed by Frenette.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PETER Y. CHOI whose telephone number is (571)272-6730. The examiner can normally be reached on Monday - Friday, 08:00 - 15:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Tarazano can be reached on (571) 272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Peter Y Choi /PYC/
Examiner, Art Unit 1786

/D. Lawrence Tarazano/
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